

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A control system for supplying a control signal (e) to a controlled apparatus, ~~(P)~~, the system comprising:

an error generator that produces ~~generation means (3) operable to produce~~ an error signal (e) from a feedback value (F) relating to a measured operating parameter of a controlled apparatus, ~~(1, P)~~, and a required value (R) relating to a desired operating parameter value of the controlled apparatus; ~~(1, P)~~; and

a controller that receives ~~(4) operable to receive~~ the error signal (e) and a gain signal, (k), and generates to output a control signal based on (e) in dependence upon the values thereof;

~~wherein a gain selector; and selection means (6) is provided, which gain selection means is operable to receive the error signal (e) and to output a gain signal (k) to the controller (4) in dependence upon the value of the error signal (e);~~

a disturbance compensator that receives an input value relating to at least one other parameter value of the controlled apparatus, receives the error signal, produces a compensated error signal based on the input value and the error signal, and provides the compensated error signal to the gain selector;

wherein the gain selector receives the compensated error signal and provides the gain signal to the controller based on the value of the compensated error signal.

2. (Currently Amended) The control system according to system as claimed in claim 1, wherein the control signal generated by the controller (4) is operable to output a signal is equivalent to the error signal multiplied by the gain signal.

3. (Currently Amended) The control system according to A system as claimed in claim 1, wherein the error signal (e) equals the difference between the required value (R) and the feedback value (F).

4. (Currently Amended) The control system according to A system as claimed in claim 1, further comprising wherein a filter means (8) is provided which is operable to that filters the error signal and supplies (e) and to supply a filtered error signal to the disturbance compensator gain selection means (6) in place of the error signal.

5. (Canceled)

6. (Currently Amended) The control system according to claim 1, A system as claimed in claim 5, wherein the disturbance compensator compensation means (10, 12) comprises a lookup table (10) for receiving the input value, and a multiplier (12) for receiving a compensation value from the lookup table, and for multiplying the error signal by the compensation value to produce the compensated error signal.

7. (Currently Amended) A method for controlling a controlled apparatus having a measured operating parameter, the method comprising:

generating an error signal (e) from a feedback value (F) relating to a measured operating parameter value of a controlled apparatus (I, P), and a required value (R) relating to a desired value of the operating parameter of the controlled apparatus (I, P); and

generating a compensated error signal based on an input value relating to at least one other parameter value of the controlled apparatus and the error signal;

selecting a gain signal based on the compensated error signal; and

generating a control signal based on the error signal and the gain signal. (C) in dependence upon the error signal (e) and a received gain signal (K),

wherein the gain signal is selected in dependence upon the error signal.

8. (Currently Amended) The method according to A method as claimed in claim 7, wherein the control signal is equivalent to the error signal multiplied by the gain signal.

9. (Currently Amended) The method according to A method as claimed in claim 7, wherein the error signal (e) equals the difference between the required value (R) and the feedback value (F).

10. (Currently Amended) The method according to A method as claimed in claim 7, wherein the error signal (e) is filtered and a filtered error signal is used to select the gain signal (G) in place of the error signal to generate the compensated error signal.

11. (Canceled)

12. (Currently Amended) The method according to claim 7, wherein generating the compensated error signal further comprises: A method as claimed in claim 11, wherein the disturbance compensation means (10, 12) comprises
receiving the input value;
retrieving a compensation value from a lookup table (10) for receiving the input value based on the received input value; and
, and a multiplier (12) for receiving a compensation value from the lookup table, and for multiplying the error signal by the compensation value to produce the compensated error signal.

13. (Original) A gas turbine engine controller including a control system as claimed in claim 1.

14. (Original) A controller as claimed in claim 13, wherein the measured operating parameter is temperature.

15. (Original) A method of controlling a gas turbine engine including a method as claimed in claim 7.

16. (Original) A method as claimed in claim 15, wherein the measured operating parameter is temperature.